



REPLY TO:  
SE MICHIGAN DISTRICT HEADQUARTERS  
ENVIRONMENTAL RESPONSE DIVISION  
38980 W. SEVEN MILE ROAD  
LIVONIA, MI 48152-1006

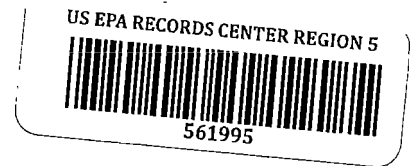
JOHN ENGLER, Governor

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

RUSSELL J. HARDING, Director

**ENVIRONMENTAL RESPONSE DIVISION**



December 20, 1995

Mr. Ralph Dollhopf  
U.S. EPA Agency  
Emergency Response #1  
9311 Groh Road  
Gross Isle, MI 48138

RE: Dump Near Wick Elem School Site, Romulus, MI, Wayne County

Dear Mr. Dollhopf:

For your files, enclosed please find copies of the following documents for the above referenced site:

1. Remedial Investigation Phase II Report, Dated March, 1995,
2. Interim Response Phase I - Test Pitting Program Technical Memo 1. and Perimeter Air Monitoring Report, Dated June, 1995,
3. Workplan for Interim Response, Phase II Dated August, 1995.

If you have any questions, please do not hesitate to contact me at 313-953-1462.

Sincerely,

Karen D. Thomas  
Project Manager

cc:

Mr. Oladipo Oyinsan, ERD, MDEQ  
Ms. Mary Vanderlaan, ERD, MDEQ

Enclosures

RECEIVED

OCT 19 1995

ENV. RESPONSE DIV.  
DETROIT

TO: EPA  
8/16/95  
by ABB  
Environmental

WORK PLAN  
DUMP NEAR WICK ELEMENTARY SCHOOL  
INTERIM RESPONSE, PHASE II

PROJECT BACKGROUND

The Dump Near Wick Elementary School (Wick) site is a 100-acre parcel located northeast of the Wick Elementary School on Wick Road, Michigan. The site is located north of Wick Road, west of Wayne Road, and east of Ozga Road in Wayne County (see Figure 1).

In February 1993, a geophysical investigation conducted by ABB Environmental Services, Inc. (ABB-ES) at the request of the Michigan Department of Natural Resources (MDNR) revealed several areas at the site where metallic objects may be buried. In November 1994, MDNR and ABB-ES personnel searched the site for additional drums visible at the ground surface. Although no large groups of drums were found, several scattered drums were discovered, most of which were crushed and /or empty.

During February 1995, ABB-ES conducted a Phase I Interim Response to assess the nature of the buried metallic wastes identified during the geophysical investigation and to assess whether areas where a significant number of empty surface drums included buried drums containing wastes. This activity included test-pitting at 18 locations (TP-1 through TP-18) across the site. Buried drums were identified at only one location (TP-16). The buried metallic wastes at the other test pit locations were found to consist mainly of construction and demolition debris. None of the surface drum areas were found to include buried drums containing wastes.

PROJECT OBJECTIVES

The overall project objective for the Phase II Interim Response is to remove and dispose of drums observed at the surface and within test pit area TP-16. To meet this overall objective, the following more specific project objectives have been identified:

- repair site grid;
- identify and mark property boundaries;

- procure drum removal and disposal services; and
- oversee and document drum removal and disposal activities.

Because the site is heavily wooded, both ABB-ES and MDNR recognize that it is likely that not all drums will be found during this scope of work. ABB-ES and MDNR further recognize that should the work be conducted when the ground is heavily vegetated (i.e., during the summer or fall), or when the ground is deep in snow, the likelihood of missing a larger number of drums increases.

### SCOPE OF WORK

The following 12 tasks will be performed by ABB-ES to assist the MDNR in meeting the project objectives.

#### **Task 1: Initiate Project/Develop Work Plan**

This task includes the activities necessary for ABB-ES to initiate the project and to develop the project Work Plan. These activities include attending a project kick-off meeting, developing a preliminary work plan outline and budget estimate, and other project management activities.

The Work Plan explains the scope, schedule, and estimated budget for the project and describes the methods to be used in implementing the tasks. The Work Plan also assigns responsibilities to key project personnel.

Three copies of the draft Work Plan will be submitted to MDNR for review and comment. After receiving written comments, ABB-ES will make the appropriate revisions and submit seven copies of the final document. In preparing the project budget and schedule, it is assumed that revisions to the Work Plan requested by the MDNR will be minor.

#### **Task 2: Revise Site Health and Safety Plan**

ABB-ES will review available data regarding contaminants previously identified at the site during the Phase I test-pitting program to assess the potential hazards that may be encountered during the Phase II Interim Response. ABB-ES will use this information to revise the existing site-specific Health and Safety Plan (HASP) in accordance with ABB-ES' Corporate Health and Safety Program and Occupational Safety and

Health Administration (OSHA) requirements to minimize the risk to ABB-ES and MDNR staff from potential chemical and physical hazards at the site.

The HASP will include information on expected contaminants, a hazards evaluation, anticipated levels of personal protection, decontamination procedures, and a list of monitoring equipment to be provided and used by ABB-ES. Air monitoring action levels and required response actions, along with emergency procedures and phone numbers, will be included. A copy of the HASP will be kept on-site during field activities. Two copies of the HASP will be submitted to the MDNR for their files.

All personnel conducting field activities at the site will be required to read the HASP and must have satisfied the OSHA training requirements outlined in 29 CFR 1910.120. Based on available data, it is anticipated that Level B protection will be necessary for personnel working in areas with buried drums (TP-16) and where surface drums with partial contents have been identified. It is assumed that work conducted in areas identified as containing empty surface drums will be conducted under Level D protection.

### **Task 3: Repair Site Grid/Identify and Mark Property Boundaries**

Based upon a recent site visit by ABB-ES, it appears that much of the grid node markers are no longer in-place, making it likely that the majority of the grid will require repair. The original grid was marked using stakes at 100-by-100-foot intervals, over an area of approximately 70 acres. ABB-ES will retain a surveyor to re-survey and replace grid node markers that are now missing from the original grid. It is assumed that MDNR will, based upon project continuity, request that ABB-ES procure the surveyor (Atwell-Hicks, located in Ann Arbor, Michigan) used previously to develop the site grid and base map.

In addition, the surveyor will identify and set property corners for the Wick site boundary. It is anticipated that drums will be removed from the two parcels of land adjacent to the northeastern boundary of the Wick site. To allow for identifying the boundaries of the Wick site and the two adjacent properties during drum removal activities, the surveyor will place four-foot long stakes at 200-foot intervals along the eastern property line of the Wick property and along the boundaries of the two adjacent parcels.

Survey results will be provided on a scaled map showing the site grid, and the Wick site property boundaries.

#### **Task 4: Develop Bid Package to Procure Drum Excavation Services**

ABB-ES will prepare a bid package for MDNR's and the Michigan Department of Management and Budget's (MDMB) use in procuring a drum removal contractor. ABB-ES will provide bid forms and administrative specifications (Division 0) for attachment to the technical specifications prepared by ABB-ES.

The bid package will be prepared using the Construction Specifications Institute (CSI) standard format and will include a scope of services for construction of a larger temporary drum staging area to accommodate the numerous surface drums anticipated, a temporary decontamination pad for decontaminating heavy equipment, vehicles, and other equipment and tools as required, drum removal and staging, and the sampling of the drum's contents for disposal analyses. ABB-ES has assumed that all analyses will be performed by the MDNR laboratory.

ABB-ES will submit three copies of the draft specifications for review by MDNR. Following MDNR's review of the draft specifications, ABB-ES and the MDNR will discuss the specifications via a telephone conference call. ABB-ES will incorporate MDNR's comments, as appropriate, and submit three bound copies and a reproducible original of the final bid package to the MDNR.

#### **Task 5: Procurement Assistance**

ABB-ES understands that the MDNR will be responsible for issuing the bid documents to qualified contractors and for selecting a contractor to perform the drum excavation services at the site. ABB-ES will provide assistance to the MDNR and MDMB during the procurement process. In developing the budget estimate for this task, it was assumed that ABB-ES will perform the following tasks:

- ABB-ES will attend one pre-bid meeting at the site to assist the MDNR and MDMB in presenting the requirements of the work.
- Following the pre-bid meeting, ABB-ES will (in consultation with the MDNR) develop an addendum to the specification package to clarify issues raised during the pre-bid meeting. In

developing the budget for this task, ABB-ES has assumed that the addendum will be brief (i.e., less than five pages) and will not require any substantive re-design work.

- ABB-ES will review the technical content of the three lowest-cost bids and make recommendations on the adequacy of proposed methods, equipment, contractor qualifications, and materials. ABB-ES will present its recommendations in a letter to the MDNR.
- ABB-ES will attend one pre-award meeting with the potential contractor to clarify technical and logistical issues.
- It is assumed that MDNR and MDMB will complete procurement steps in a timely manner, as necessary to meet the MDNR-specified schedule.

#### **Task 6: Mobilization and Locate Surface Drums**

This task includes ABB-ES' procurement and mobilization of equipment and facilities required for drum removal activities. ABB-ES will provide a temporary field office/storage trailer on the site during the field activities. The trailer will be installed near the existing entrance to the site to provide a central location for communications, shelter, office space, equipment storage, and related activities. The project budget includes the cost of having electricity and telephone services connected to the trailer.

During this task, ABB-ES will use information collected by the MDNR in November 1994 to locate and mark areas from which to remove drums, and to mark those drums containing wastes (and thus, will require Level B protection during removal). Once the areas are marked, ABB-ES will develop a systematic approach to removing the drums.

#### **Task 7: Drum Excavation Oversight**

ABB-ES will review contractor submittals (Work Plan, HASP, and Schedule) and attend one pre-construction conference. In developing the budget estimate for this task, ABB-ES has assumed that contractor submittals will be approved upon a single revision by the contractor.

ABB-ES will oversee the construction of the temporary de-con pad and drum staging area by the drum excavation contractor.

ABB-ES will provide oversight and documentation during drum excavation and sampling activities. The ABB-ES field team will consist of a field operations leader (FOL) to direct and lead the field effort, and a geologist to assist in the field work and serve as health and safety officer (HSO). In areas where surface drums with contents will be removed (and thus, requiring Level B protection), or in area TP-16 (where buried drums will be removed, requiring Level B protection), an additional ABB-ES person will be positioned in the contaminant reduction zone ready to assist in the exclusion zone in the case of an emergency.

Areas where surface drums are to be removed are shown in Figure 2. Based upon field notes from the site walk-over, it has been estimated that approximately 165 drums at the site may have partial contents and that approximately 470 drums are empty. Additional areas may be discovered once field work begins and will be addressed at that time. The project budget allows for ten days of drum excavation activities.

It is anticipated that one track-hoe equipped with a grappler, and another track-hoe equipped with a bucket will be used to remove the drums and transport them to the drum staging area. Drums with contents will be overpacked and then transported to the drum staging area for sampling. In addition, after a drum with contents has been removed, a sample of the soil beneath it will be collected and submitted to the MDNR laboratory for analysis. If it appears that waste has been released from a drum, the potential waste will be placed into an overpack for subsequent disposal and a sample of the soil beneath the drum will be collected for analysis. In cases where empty drums are removed, samples of the soil below the drums will be collected only when soil staining is noted.

Results of the earlier test-pitting indicate that several drums or paint cans are present at TP-16 in an area of approximately 400 square feet. Excavated drums or paint cans will be placed into overpack containers and transported to the drum staging area. Soil samples of the surrounding landfill materials will be collected for analyses to assess the impact of buried drums and cans on the surrounding materials. Any material that appears to have been released from the drums will also be placed into overpack drums.

The drum removal contractor will sample excavated drums that contain wastes. The overpack containers will be labeled with the date and the sample designation. A description of the drums' appearance (condition, labels, markings, etc.) and contents (i.e., solid, liquid, sludge, color, etc.) will be recorded in the site log book. The samples will be submitted to the MDNR laboratory for analysis.

Heavy equipment used for the field activities will be decontaminated by the contractor prior to arriving at the site. Equipment will not be decontaminated between areas where surface drums are located within the site boundary. However, if necessary, gross contamination will be removed from the excavation equipment prior to moving to another on-site location.

Before and during the drum removal activities, the HSO will monitor air quality at various points near the excavation to establish safe operating conditions for the field team. Air monitoring will also be conducted at the perimeter of the site to evaluate the concentrations of volatile organic compounds (VOCs), if any, that result from the drum removal activities (see Task 9).

The air quality monitoring program to be conducted near the work areas will include:

- collection of baseline measurements one day prior to the start of drum removal activities using a photoionization detector (PID) a combination lower explosive limit (LEL)/oxygen meter, a radiation detector, and cyanide and hydrogen sulfide meters;
- ambient air monitoring within the exclusion zone using a PID, a combination LEL/oxygen meter, a radiation detector, and cyanide and hydrogen sulfide meters;
- exclusion zone perimeter monitoring for total VOCs using a PID; and
- personal exposure monitoring for selected VOCs using passive sampling badges on a maximum of three on-site personnel working inside the exclusion zone.

These monitoring requirements and associated action levels will be presented in the HASP (Task 2).



### **Task 8: Site Perimeter Air Monitoring**

Air quality monitoring at the site perimeter will be conducted by ABB-ES' air quality specialist. The site perimeter air monitoring program is based on general requirements provided by the MDNR Air Quality Division. These guidelines have been adapted to the specific conditions expected at the Wick site. The proposed program will include the following:

- collection of background measurements for a period of three days prior to the initiation of drum removal using passivated air canisters to collect samples for compound-specific analyses for VOCs. An experienced air quality specialist from ABB-ES' Portland, Maine, office will be flying to Michigan to perform the perimeter air monitoring;
- recording of hourly meteorological observations (air temperature, wind direction, and approximate wind speed) during the baseline period and during drum removal activities;
- compound-specific monitoring at the site perimeter for VOCs using passivated canisters during drum removal activities; and
- downwind site perimeter monitoring for total VOCs using a PID during drum removal activities, if real time action levels are exceeded at the exclusion zone perimeter.

Drum removal activities are scheduled to be conducted in December 1995. Because soil conditions are anticipated to be wet and/or frozen at this time, dust is not expected to be generated, and monitoring for particulate and/or non-volatile compounds in the air is not believed to be necessary. Therefore, high-volume air sampling and respirable dust monitoring will not be conducted during drum removal activities.

Additional details of the perimeter air monitoring program are provided in Appendix A.

### **Task 9: Demobilization**

This task includes decontaminating and removing drum excavation equipment. Decontamination fluids will be collected by the excavation contractor, drummed, and staged in the temporary drum-staging area.

Discarded personal protection equipment (PPE) will also be drummed and staged. For budgeting purposes, ABB-ES has assumed that twelve drums of decontamination fluids and twelve drums of disposable PPE will be generated during the field program. ABB-ES will oversee the drum excavation contractor during this work.

Other activities during this task by ABB-ES include disconnecting telephone and electrical service, and removing the temporary field office/storage trailer.

#### **Task 10: Drum Disposal Oversight**

ABB-ES will procure a licensed waste-management firm to transport the materials to an acceptable off-site facility for disposal. ABB-ES will oversee removal of the drums from the site by the contractor. As the generator of record, the MDNR will sign all manifests for waste transport and disposal

In developing the budget estimate for this task, ABB-ES has assumed that 165 drums containing wastes, 470 empty crushed drums, 12 drums of decontamination fluids, and 12 drums of used personnel protection equipment will be disposed of in a Type II landfill. Because the volume and characteristics of the wastes are not known, ABB-ES has included an allowance of \$75,000 in the project budget for transport and disposal. If the cost is higher than the budget allows, or if hazardous wastes are encountered, it will be necessary to augment the project budget.

It is assumed that all drums can be removed within five days and that perimeter air monitoring will not be necessary during loading and transport of drums from the site.

#### **Task 11: Analytical Program**

ABB-ES has assumed that all waste samples, including any soil that has been stained with waste and placed in an overpack, will be analyzed by the MDNR laboratory for VOCs, semivolatile organic compounds, pesticides, PCBs, selected metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver and zinc.), and hazardous waste characteristics (ignitability, corrosivity, reactivity, and toxicity). Soil samples collected beneath drums which have contents will be analyzed for VOCs, base neutrals, metals, and PCBs.

Air samples collected in passivated canisters will be analyzed for VOCs. Personal sampling badges will be analyzed for selected VOCs based upon the analytical results from the canisters. ABB-ES has assumed that perimeter air monitoring samples and personal badges will be analyzed by a laboratory contracted by ABB-ES.

#### **Task 12: Reporting/Documentation**

ABB-ES' field staff will maintain a log book documenting field activities by ABB-ES and its contractors during the project. ABB-ES will also provide photo-documentation of the drum removal operations. ABB-ES will complete a brief daily activity log summarizing activities completed for each day that field work takes place. Copies of the daily activity logs will be provided to the MDNR within one week after the field activities are completed. Due to the anticipated short duration of the project, interim progress reports will not be prepared by ABB-ES. At a minimum, ABB-ES' Site Manager will contact the MDNR Project Director weekly to discuss the current status of the project. Sample collection receipt forms provided by the MDNR will be completed by ABB-ES. ABB-ES' standard sampling forms will also be completed.

Upon receipt of the analytical results from the laboratory, ABB-ES will write a technical memorandum documenting field procedures and summarizing the results of the surface drum removal program. Analytical results for soil samples, drum samples, and air monitoring samples will be tabulated and briefly discussed. Copies of ABB-ES' standard sampling forms will be appended to the technical memorandum.

Two copies of the draft memorandum will be submitted to the MDNR for review and comment. After receiving written comments, ABB-ES will make the appropriate revisions and submit three copies of the final document.

#### **PROJECT ORGANIZATION AND MANAGEMENT**

As prime contractor, ABB-ES will provide the overall project management and technical supervision on the project and will have the primary responsibility for successful completion of the project. Figure 3 presents the project organization.

As the Program Manager, Michael O'Hearn, P.E., will be responsible for coordinating and monitoring the performance of the Site Manager and other project staff with regard to the technical, legal, and administrative requirements of the contract and site-specific agreements. Mr. O'Hearn will confer regularly (e.g., weekly) with the project team to review project status, ensure commitments are met, and to identify problems or potential problems to be addressed. The Program Manager will also review all invoices and project deliverables prior to submittal to MDNR, and communicate with the MDNR and with subcontractors on selected project issues. Mr. O'Hearn will be supported in this role by the Project Assistant, Kim Allen-Thayer.

Daniel Argentati, C.P.G., will be the Site Manager for the Wick project. The Site Manager is the primary contact between MDNR and the project team on issues relating to the project scope, schedule, budget, and technical issues. Administratively, his responsibilities are to ensure that the project is proceeding on schedule and that the budgets for the various tasks are maintained. Mr. Argentati will also have responsibility for technical direction of the investigation and coordination within the various technical disciplines required to complete the project. Mr. Argentati also served as Site Manager during previous investigations conducted for the MDNR at the Wick site.

As Field Operations Leader, Craig Kielty will be responsible for successfully implementing the field program. He will direct all field activities and monitor work performed by the test-pitting/surface drum removal contractor. Mr. Kielty is experienced in conducting test-pitting and surface drum removal programs at hazardous waste sites. Mr. Kielty will be supported in the field by Dave Belan. Mr. Belan will also be the Health and Safety Officer (HSO). The HSO is responsible for developing the HASP and ensuring that the project team complies with requirements of the HASP. The site perimeter air monitoring program will be conducted by Andre Casavant from ABB-ES' Portland, Maine office.

Technical Review for the project will be provided by Garret Bondy, P.E., who is experienced in drum excavation operations and characterizing drummed wastes at landfill sites.

Resumes for all key project personnel are on file with the MDNR, Environmental Response Division, in Lansing, Michigan.

ABB-ES will utilize computerized management information systems to assist in the overall management of the project and to track project and work assignment schedules, budgets, and manpower requirements. Through the use of these systems, monthly invoices will be submitted to MDNR. During field activities, costs will be estimated on a daily basis to ensure that project costs do not exceed the authorized funds. This information will be provided to the MDNR Project Director.

To monitor manpower utilization, separate activity codes will be assigned to track labor costs for each major phase of the project (e.g., field work). ABB-ES will not segregate costs in any other way than by phase. If MDNR requires an alternate cost segregation scheme, it must be requested prior to Work Plan approval.

### PROJECT SCHEDULE

As shown in Figure 4, the Wick project is expected to require approximately 41 weeks to complete following MDNR approval of the Work Plan and issuance of a Contract Order.

The schedule is based upon the scope of work described previously and the following assumptions:

- The MDNR laboratory will provide analytical results within three weeks.
- Field activities will be conducted during the winter when the ground is frozen and access to wet locations is possible using the equipment described within this Work Plan, without improving the existing on-site roads.
- MDNR will provide access to the site and surrounding off-site properties as necessary for ABB-ES and its contractors to conduct the work.
- Field work will not be delayed by inclement weather or other unforeseen circumstances beyond ABB-ES' control.
- MDNR review time will not exceed two weeks for the draft Work Plan and the Technical Memorandum.

- Establishment of electrical and telephone service to the site trailer will not be delayed by the public utilities involved.

Significant delays in the project schedule beyond the control of ABB-ES may require a commensurate increase in the project budget due to costs for time related activities such as project management functions.

### PROJECT BUDGET

- The total estimated cost of the program described in this Work Plan is \$309,076. Table 1 presents estimated labor hours by task. A summary of other direct costs is provided in Table 2. Table 3 summarizes budget information including labor costs, other direct costs, and fee. A completed OF-60 along with detailed labor cost information for ABB-ES will be included with the final Work Plan.

The budget provides for up to ten days of drum removal activities. The number of drums that can be removed within this time depends on the difficulty of ingress and egress at each location, the number of drums removed and/or sampled, the amount of soil requiring removal, and other factors that are difficult to predict at this time. The budget assumes that 165 drums with contents and 470 empty drums can be removed. To ensure that the funds authorized for the drum removal program are not exceeded, ABB-ES will track expenditures in the field on a daily basis. The test-pitting work will continue until either the budgeted amount is reached or the MDNR requests that the work cease, whichever occurs first.

This budget breakdown is for estimating purposes only. The actual costs for each task may vary from these estimates, and surplus project funds resulting from cost savings achieved in one task may be applied to another task, as long as the total project budget is not exceeded. ABB-ES will not exceed the budget established in the approved Work Plan without written authorization of the MDNR.

The project budget is based on the scope of work described previously and the following assumptions:

- Field activities will occur in the winter.
- MDNR is responsible for providing access to all portions of the site or adjacent properties as necessary for ABB-ES and its subcontractors.

- Access to all work locations can be gained with track-mounted excavating equipment requiring limited brush clearing and tree removal.
- ABB-ES will provide all air monitoring laboratory services including air canisters and badges. MDNR will provide laboratory services and pre-prepared sample bottles for waste and soil samples.
- The excavation contractor will provide the air supply for all ABB-ES personnel working within the exclusion zone.
- Any drums or wastes that are removed from the excavations will be overpacked and moved to the staging area pending disposal.

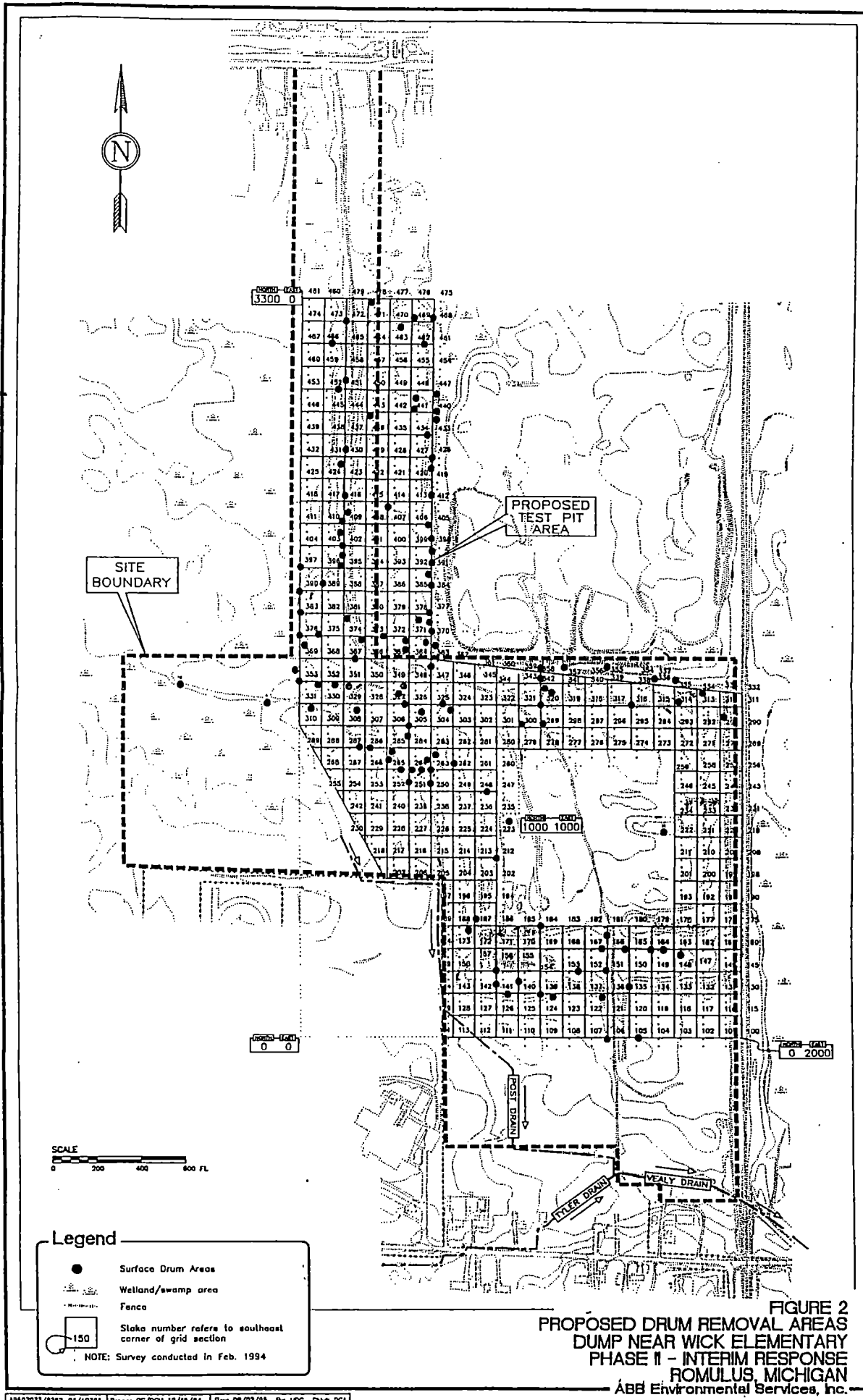
Other assumptions applicable to specific tasks may be presented in the appropriate tasks descriptions. Significant deviations from these assumptions may make it necessary to adjust the project budget (and/or schedule). In addition, the project budget is based on our current MDNR-approved rates which may change during the project. ABB-ES will invoice MDNR for services provided during this project using the approved rates in effect at the time of performance. This may require an adjustment to the authorized project budget during the course of the project.

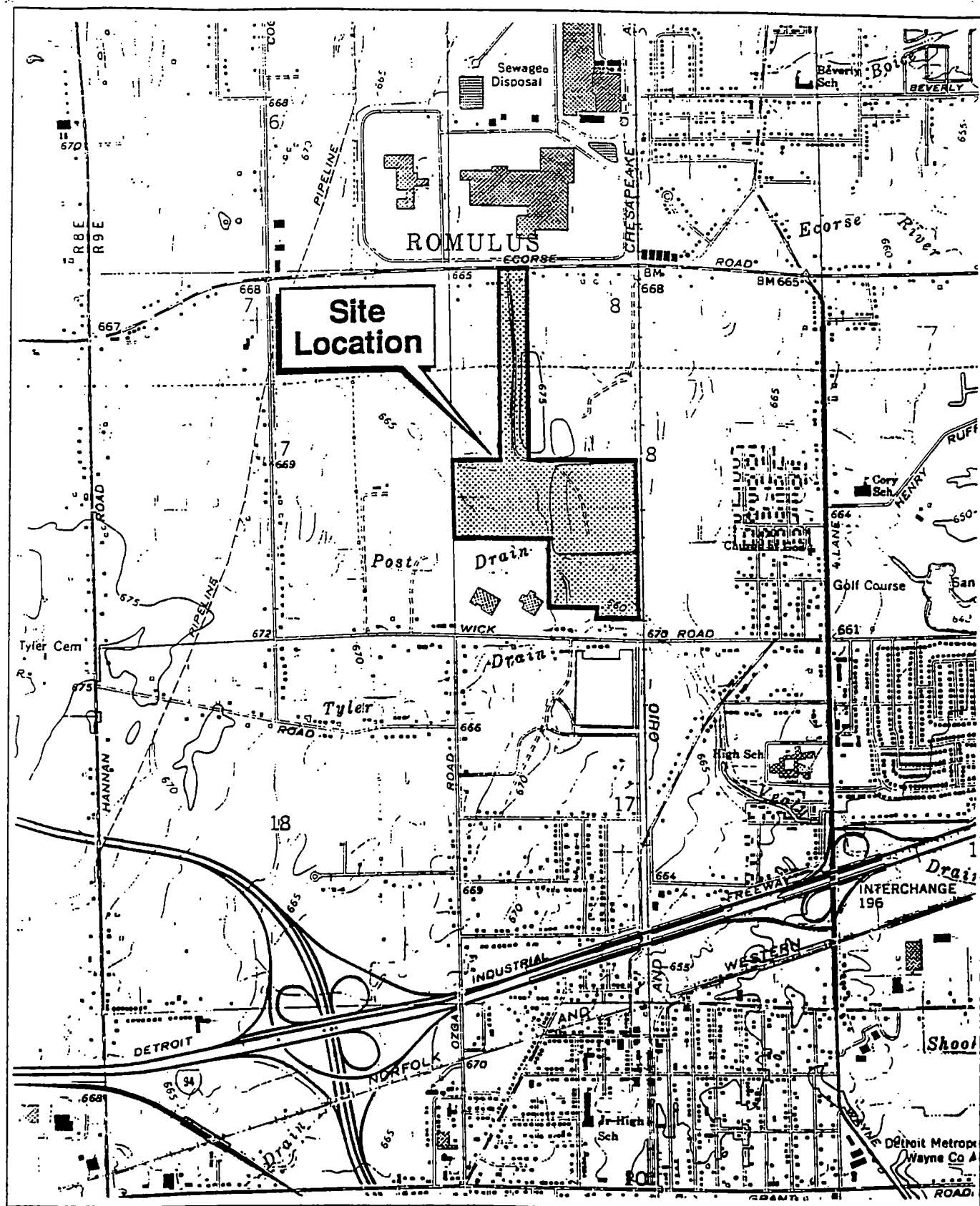
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ABB ENVIRONMENTAL SERVICES, INC.  
LABOR COST SUMMARY  
DUMP NEAR WICK ELEMENTARY - INTERIM RESPONSE PHASE I  
9252-01

CLASSIFICATION	NAME	FUNCTION	HOURS
P-3	D. ARGENTATI	SITE MGR/GEOLOGIST	436.0
	G. BONDY	SR ENGINEER	246.0
	M. O'HEARN	PROGRAM MANAGER	62.0
	M. PETERS	ENGINEER	20.0
	S. RANGER	CHEMICAL ENGINEER	<u>5.0</u>
		TOTAL P-3 ****	769.0
P-2	D. BELAN	GEOLOGIST	280.0
	A. CASAVANT	AIR QUALITY SCIENTIST	261.0
	C. KIELTY	SCIENTIST	434.0
	M. MACLEOD	HEALTH AND SAFETY SUPVR.	25.0
	C. MCKENNA	DATA COORDINATOR	<u>85.0</u>
		TOTAL P-2 ****	1085.0
P-1	R. HAGEN	BUYER	16.0
	P. KACZOR	ASSOCIATE GEOLOGIST	65.0
	J. RUPRICH	ASSOCIATE ENGINEER	<u>100.0</u>
		TOTAL P-1 ****	181.0
T-3	M. CARBONE	TECHNICIAN	<u>91.0</u>
		TOTAL T-3 ****	91.0
T-1	K. ALLEN-THAYER	PROJECT ASSISTANT	<u>91.0</u>
		TOTAL T-1 ****	91.0
CL	P. DENSON	CLERICAL	<u>17.0</u>
		TOTAL CLERICAL ****	17.0
		TOTAL LABOR ****	2,234.0







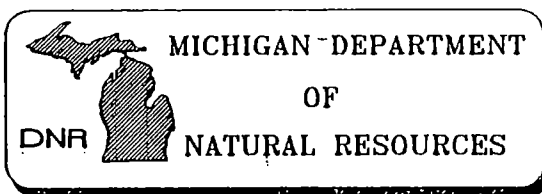
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0 1000 2000 3000 FT.

Taken from the Belleville and Wayne, Michigan,  
7.5 Series U.S.G.S Topographic Quadrangle Map



**FIGURE 1**  
**SITE LOCATION**  
**DUMP NEAR WICK ELEMENTARY**  
**PHASE II - INTERIM RESPONSE**

ABB Environmental Services, Inc.



**SURFACE DRUM REMOVAL  
CONTRACTOR**

**MDNR LABORATORY**

**PROGRAM MANAGMENT**

M. O'Hearn, P.E.  
K. Allen-Thayer

**TECHNICAL REVIEW**

G. Bondy, P.E.

**SITE MANAGER**

D. Argentati

**FIELD OPERATIONS LEADER**

C. Kielty

**CONTRACTOR OVERSIGHT**

D. Belan

**HEALTH AND SAFETY OFFICER**

D. Belan

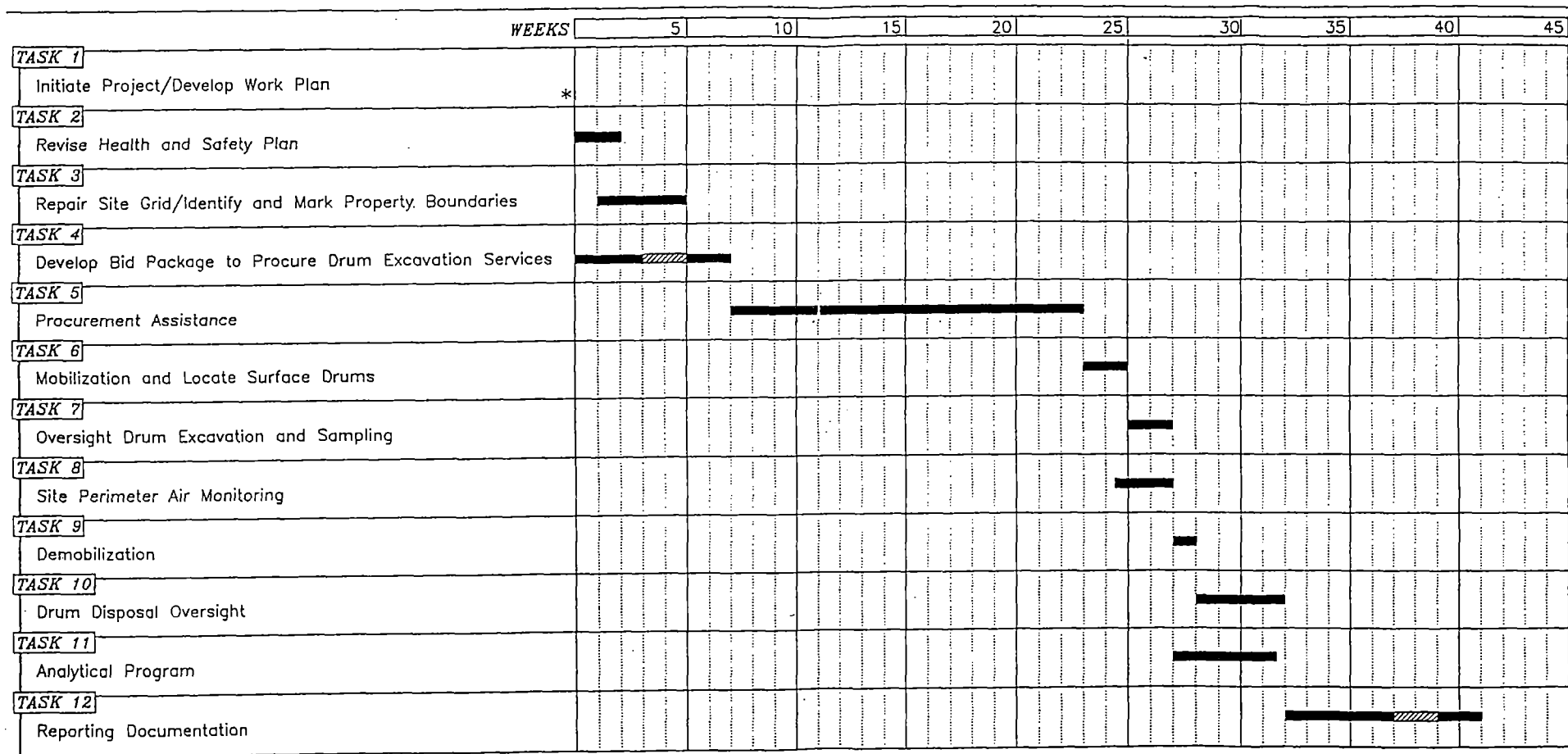
**AIR MONITORING**

A. Casavant

**WASTE TRANSPORT AND  
DISPOSAL CONTRACTOR**

**FIGURE 3**  
**PROJECT ORGANIZATION**  
**DUMP NEAR WICK ELEMENTARY**  
**INTERIM RESPONSE - PHASE II**

ABB Environmental Services, Inc.



\* Completed before Contract Order

■ ABB Environmental activity

▨ MDNR activity

**FIGURE 4**  
**PROJECT SCHEDULE**  
**DUMP NEAR WICK ELEMENTARY**  
**INTERIM RESPONSE - PHASE II**  
 ABB Environmental Services, Inc.

**TABLE 1**  
**BREAKDOWN OF LABOR HOURS BY TASK**  
**DUMP NEAR WICK ELEMENTARY SCHOOL**  
**INTERIM RESPONSE, PHASE II**  
**ROMULUS, MICHIGAN**

TASK	Professional				Technical			Secretary/ Clerical	Task Total
	4	3	2	1	3	2	1		
1. INITIATE PROJECT/DEVELOP WORK PLAN	0	157	35	0	3	5	0	0	200
2. REVISE SITE HEALTH AND SAFETY PLAN	0	20	20	0	0	5	0	0	45
3. REPAIR SITE GRID/IDENTIFY AND MARK PROPERTY BOUNDARIES	0	40	33	4	8	3	0	0	88
4. DEVELOP BID PACKAGE TO PROCURE DRUM EXCAVATION SERVICES	0	100	0	100	25	20	0	10	255
5. PROCUREMENT ASSISTANCE	0	58	4	0	0	8	0	7	77
6. MOBILIZATION AND LOCATE SURFACE DRUMS	0	56	106	8	0	6	0	0	176
7. DRUM EXCAVATION OVERSIGHT	0	145	324	65	0	7	0	0	541
8. SITE PERIMETER AIR MONITORING	0	27	200	0	0	5	0	0	232
9. DEMOBILIZATION	0	18	43	0	0	0	0	0	61
10. DRUM DISPOSAL OVERSIGHT	0	31	87	4	0	2	0	0	124
11. ANALYTICAL PROGRAM	0	9	42	0	0	2	0	0	53
12. REPORTING/DOCUMENTATION	0	133	166	0	55	28	0	0	382
<b>TOTAL HOURS BY LEVEL:</b>	<b>0</b>	<b>794</b>	<b>1,060</b>	<b>181</b>	<b>91</b>	<b>91</b>	<b>0</b>	<b>17</b>	<b>2,234</b>

**TABLE 2**  
**SUMMARY OF OTHER DIRECT COSTS**  
**DUMP NEAR WICK ELEMENTARY SCHOOL**  
**INTERIM RESPONSE, PHASE II**  
**ROMULUS, MICHIGAN**

<b>TRAVEL:</b>	<b>\$8,256</b>
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Vehicle Charges	\$4,340
Per Diem	\$2,316
Airfare	\$1,600

<b>EQUIPMENT RENTAL:</b>	<b>\$6,775</b>
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Mobil Phone	\$150
HNu/Photoionization Meter	\$2,275
LEL/Oxygen Meter	\$150
Hydrogen Sulfide Meter	\$250
Expendables	\$950
Health & Safety Supplies	\$3,000

<b>OTHER:</b>	<b>\$124,420</b>
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Telephone	\$400
Auto Drafting	\$720
Postage/Shipping	\$6,120
Photocopying/Reproduction	\$1,100
Utilities	\$1,500
Office Trailer	\$1,200
Portable Toilet	\$80
Waste Transport/Disposal	\$75,000
Surveying	\$17,200
Air Sampling Analytical	\$20,650
Miscellaneous	\$450

<b>TOTAL</b>	<b>\$139,451</b>
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**TABLE 3**  
**BUDGET SUMMARY BY PHASE**  
**DUMP NEAR WICK ELEMENTARY SCHOOL**  
**INTERIM RESPONSE, PHASE II**  
**ROMULUS, MICHIGAN**

TASK	HOURS	COSTS (\$)				TOTAL
		LABOR (1)	OTHER DIRECT COSTS	SUBCONTRACTOR	FEE (2)	
TASKS 1 - 12	2,234	\$141,527	\$139,451	\$0	\$28,098	\$309,076

(1) Direct labor and overhead

(2) Sum of fees on direct labor and overhead, other direct costs, and subcontract costs

## **APPENDIX A**



## SITE PERIMETER AIR MONITORING PROGRAM

### MDNR - Dump Near Wick Elementary School Site

#### Interim Response - Phase II Work Plan

Site perimeter air monitoring will be conducted during the drum removal activities. This program will include a characterization of the baseline air quality at the site perimeter, as well as the air quality at the site perimeter during drum removal activities. Perimeter air monitoring will include compound-specific monitoring for volatile organic compounds. Real-time monitoring for total volatile organic compounds will be conducted, as needed, using portable instrumentation.

### 1.0 BASELINE SITE AIR QUALITY CHARACTERIZATION

#### 1.1 Sample Station Location Selection

Prior to conducting drum removal activities at the site, air monitoring will be conducted to evaluate baseline air quality. A portable meteorological station capable of monitoring wind speed, wind direction, and temperature will be set up at the site. The meteorological station will be used to assist in the selection of upwind and downwind site perimeter monitoring stations, and to provide documentation of the ambient conditions during sample collection.

One upwind station and two downwind stations will be established near the site perimeter. Sample stations will be located on platforms at approximate breathing height (4 to 6 feet above-ground). To accommodate shifts in wind direction, the sampling locations will be selected on the morning of each day of testing. During the testing, if a sustained (greater than 1 to 2 hours) wind shift is noted, air sampling may be temporarily suspended, and the sampling station locations will be moved to maintain the upwind/downwind network.

## 1.2 Compound-Specific Sample Collection

A total of three one-day sampling events will be conducted to establish baseline air quality. Samples will be collected over an approximate 8-hour period. Each sampling event will consist of the collection of one sample at each of the sampling locations. Additionally, one of the downwind samples will have a co-located duplicate sample for quality control. Therefore, four samples will be collected for each of three sampling events. A total of 12 samples, plus one blank, will be submitted for laboratory analyses. Sampling and analysis will be conducted in accordance with USEPA Method TO-14, "Determination of VOCs in Ambient Air Using SUMMA Passivated Canister Sampling and Gas Chromatographic Analysis," as found in the publication Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Parameters for analysis include volatile organic compounds (VOCs) on the USEPA's Target Compound List (TCL). Sampling and analytical methodologies are described in Section 3.0.

## 2.0 PERIMETER AIR MONITORING DURING DRUM REMOVAL

During drum removal activities, air monitoring will be conducted to evaluate the concentrations of VOCs (if any) that result from the disturbance of drums and/or site soils.

Compound-specific air monitoring is to be conducted daily for the duration of the drum removal program. Based on observations made during the previous test pitting program, real-time monitoring will only be conducted in the immediate area of the drum removal activities unless site conditions dictate otherwise (i.e., action levels are exceeded in the work area).

### 2.1 Sample Station Location Selection

As with the baseline air monitoring program, samples will be collected at one upwind and two downwind locations during each day of the drum removal activities. The meteorological station will be used to assist in the selection of upwind and downwind site perimeter monitoring stations, and to provide documentation of the ambient conditions during sample collection.

As with the baseline air monitoring, the sample stations will be set up on platforms at approximate breathing heights. To accommodate shifts in wind direction, the sampling locations will be selected on the morning of each day of testing. During the testing, if a sustained (greater than 1 to 2 hours) wind shift is noted, air sampling may be temporarily suspended, and the sampling station locations will be moved to maintain the upwind/downwind network. Under this scenario, field operations would not be suspended while sample stations are being moved.

## 2.2 Compound-Specific Sample Collection

Ten one-day sampling events have been assumed. With the exception of the sample station locations, which may change due to changes in wind direction, the samples will be collected in a manner identical to those collected during the baseline air quality evaluation. Four samples will be collected each day. Total laboratory analyses will, therefore, consist of 40 samples (plus one blank). Sampling and analysis will be conducted in accordance with USEPA Method TO-14. Parameters for analysis will include VOCs on the USEPA TCL.

## 2.3 Real-Time Air Monitoring

Real-time air monitoring will be conducted in the immediate area of drum removal activities. A description of this monitoring is included in the site-specific health and safety plan (HASP). Real-time monitoring will be conducted at the site perimeter only when action levels (see Section 3.2) are exceeded in the immediate work area (i.e., exclusion zone perimeter). Monitoring will include instrument readings at and between the downwind compound-specific sample stations.

## 3.0 SAMPLING AND ANALYTICAL METHODOLOGY

### 3.1 Target Compounds

Evaluation of the site to date has indicated the presence of petroleum-type VOCs such as benzene, toluene, ethylbenzene, and xylenes (BTEX), as well as chlorinated solvents in monitoring wells. Samples collected for the compound-specific air monitoring program will be analyzed for all VOCs on the USEPA TCL.

Samples collected previously from drums found buried at the site perimeter contained semivolatile organic compounds (SVOCs) and inorganic constituents. Drum removal activities are anticipated to be conducted in December 1995. Due to the low volatilization potential of SVOCs in cold temperatures and the low potential for producing dust during the drum removal activities, air monitoring for SVOCs and inorganic constituents is not proposed.

### 3.2 Action Levels

In accordance with MDNR guidance, site perimeter action levels of 1 percent of the American Conference of Government Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) will be used as action levels for non-carcinogens. For carcinogens, the action limit will be the one-in-one-million risk level. Based on the compounds detected in monitoring wells at the site, it is anticipated that benzene (considered a carcinogen) will have the lowest action level, at 0.1 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). This is approximately equal to 0.03 parts per billion (ppb).

However, the use of benzene as the controlling compound for establishing action levels presents certain problems. Unlike other substances, whose presence in the air may be attributed solely to the site, benzene is a ubiquitous compound (present in gasoline and as a product of engine exhaust), and is frequently detected in baseline and background air samples at levels significantly above the action level. Therefore, rather than focusing on benzene only, the air monitoring strategy will employ a "site profile" which considers the concentrations of VOCs measured during the baseline air monitoring in comparison to concentrations measured during drum removal. Further, the concentrations measured at the upwind site perimeter will be compared to the concentrations measured at the downwind site perimeter.

Real-time air monitoring will be conducted at the site perimeter if action levels, as established in the site-specific HASP, are exceeded as the perimeter of the exclusion zone. If real-time site perimeter monitoring is initiated, an action level of 1 part per million (ppm) above background will be established as the downwind site perimeter action level, in accordance with MDNR guidance. Readings above this level will trigger the implementation of corrective actions to reduce emissions at the site. If VOC levels exceed 10 ppm above background, at the proposed test pit area (TP-16), the Field Operations Leader will immediately be notified. The excavation in progress will be backfilled immediately to reduce the emissions.

### 3.3 Compound-Specific Air Sampling Methodology

Air quality samples for the evaluation of specific VOCs will be collected in accordance with USEPA Method TO-14. This method involves the collection of a whole-air sample in a polished stainless-steel SUMMA canister. Recent advances in gas chromatography/mass spectrometry (GC/MS) and air sample pre-concentrator technology have resulted in the ability to detect VOCs at levels as low as 0.05 ppb on a routine basis.

One SUMMA canister sample will be collected at each sampling station location. Using a vacuum gauge and calibrated flowmeter, integrated samples will be collected over the eight-hour sample collection period.

A field log book will be maintained that will note sample times, vacuum gauge readings, sample locations, wind direction, and general ambient conditions during each sampling event.

After the completion of sampling, the canisters will be shipped with chain-of-custody documentation to the laboratory for analysis. Samples will be concentrated and analyzed via GC/MS for VOCs on the USEPA TCL.

### 3.4 Real-Time Air Monitoring

As needed, real-time monitoring will be conducted at the site perimeter using portable, direct-reading instrumentation. An organic vapor monitor (OVM) which contains a photoionization detector will be used. The instrument detects VOCs at a detection limit of approximately 0.5 to 1 ppm.

When conducted, instrument readings will be noted at the site perimeter during the entire period when action limit exceedances are observed at the drum removal exclusion zone perimeter. Readings will be taken at a minimum of one-hour periods. Instrument reading locations will be at and between downwind compound-specific sample station locations.

The field log book will be used to record instrument readings, calibration data, and other relevant comments or notes.

### 3.5 Quality Control Procedures

For the compound-specific sampling, one of the downwind locations will be sampled in duplicate during each day of sampling for quality control precision analysis.

Laboratory quality control procedures will be conducted in accordance with the method, including cleaning and conditioning of the SUMMA canisters to ensure that they are not contaminated, method detection-limit studies, instrument tune and calibration, the analysis of field and method blanks, and the determination of internal standard/surrogate recoveries.

The OVM instruments will be calibrated on a daily basis, using an appropriate reference gas. Instrument calibration will be conducted at the beginning and end of each day to evaluate calibration drift. Additionally, in the event that instrument readings in excess of the action limit are sustained, the instrument will be re-calibrated to verify that the readings are genuine.

### 4.0 DATA REDUCTION AND REPORTING

Compound-specific analytical results will be reported in units of ppb for each detected VOC compound. Analytical detection limits will be reported for compounds that are not detected.

Real-time instrument readings will be reported in units of ppm (calibration gas equivalents).

A description of the sampling and analytical procedures and a summary of field conditions will be included with the reported data.